

**OUTSIDE REAR-VIEW MIRROR FOR A MOTOR VEHICLE  
BACKGROUND AND SUMMARY OF THE INVENTION**

[0001] This application claims the priority of German Application No. 102 57 983.0 filed on December 12, 2002, the disclosure of which is expressly incorporated by reference herein.

[0002] The invention relates to an outside rear-view mirror for a motor vehicle. Certain preferred embodiments relate to an outside review mirror assembly for a passenger car of the sports car type, in the case of which a housing accommodating a mirror glass plate is connected with a carrying device having supporting arms, which carrying device is supported on a body of the passenger car.

[0003] An outside rear-view mirror of the initially mentioned type known from British Patent Document GB 2 130 990 (corresponding U.S. Patent 4,585,316) has a housing for a mirror glass plate which is held on a body of a motor vehicle by means of horizontally aligned supporting arms and a fastening plate. The supporting arms and the housing are made of one piece and consist of a plastic material. U.S. Patent Document 4,759,620 shows a comparable construction.

[0004] From U.S. Patent Document 5,268,797, an outside rear-view mirror of a motor vehicle is known whose housing accommodating a mirror glass plate is provided with a lateral holding device facing a vehicle body. The holding device has

a carrying bow which adjoins the housing by means of relatively short arms. In areas, the arms are constructed as rudiments on the housing, a fixing pin and a fastening screw being used for holding the bow on the rudiments.

[0005] It is an object of the invention to create an outside rear-view mirror for a motor vehicle, which is distinguished by a simple and reliable construction while offering constructive degrees of freedom.

[0006] According to certain preferred embodiments of the invention, this object is achieved by outside rear-view mirror for a motor vehicle, particularly a passenger car of the sports car type, in the case of which a housing accommodating a mirror glass pate is connected with a carrying device having supporting arms, which carrying device is supported on a body of the passenger car, wherein the carrying device and the housing are produced separately from one another, free ends of the supporting arms of the carrying device projecting into the housing and being connected with carrying elements of the housing.

[0007] The principal advantages achieved by means of the invention are that the separately produced housing and carrying device, which carrying device has supporting arms, permit a use of materials for these components which corresponds to the requirements. As a result of this design, multiple construction variants can also be implemented. Because of the carrying device and the clear type of connection with the housing, the construction of the outside rear-view mirror can be

easily implemented. The housing and the carrying device can also be integrated in a style concept by means of which a particularly aesthetic effect can be achieved. The V-shaped course of the supporting arms according to certain preferred embodiments finally contributes to the fact that an effective supporting of the housing is ensured.

[0008] Other objects, advantages and novel features of the present invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

[0009] Figure 1 is a partial lateral view of a passenger car in the area of a windshield frame with an outside rear-view mirror according to preferred embodiment of the invention;

[0010] Figure 2 is a view in the direction of the arrow A of Figure 1;

[0011] Figure 3 is a sectional view approximately according to Line III-III of Figure 2;

[0012] Figure 4 is an exploded diagonal view from the left front of the outside rear-view mirror of Figures 1 and 2; and

[0013] Figure 5 is a diagonal view of a carrying device of the outside rear-view mirror of Figures 1-4.

## **DETAILED DESCRIPTION OF THE DRAWINGS**

[0014] In the area illustrated in Figure 1, a passenger car 1 of the sports car type with a dynamic appearance and superior driving performance has a vehicle body 2 with a frame 4 accommodating the windshield 3, a forward side part 5, a door 7 comprising a lowerable side window pane 6, and a removable roof 8 which extends between a transverse part 9 of the frame 4 and a rollover bar system which is not shown in detail.

[0015] Adjacent to a joint 10 at an exterior door wall 11, the door 7 carries an outside rear-view mirror 12 which projects upward from a belt line 13 of the vehicle body 2. The outside rear-view mirror 12 has a housing 15 which surrounds a mirror glass plate 14 - Figure 3 -housing 15 is comprised of a plastic material or another suitable material, and has the shape of a horizontal bowl and, in the driving direction B, has an aerodynamic or approximately drop-shaped design. By way of a housing opening 16, a console 17, a mirror glass plate carrier 18 and the mirror glass plate 14 are inserted - Figure 4.

[0016] The housing 15 rests on a carrying device 21 which is provided with supporting arms 19 and 20; consisting, for example, of a light-metal alloy; and is connected with the exterior door wall 11 while supporting itself thereon. The carrying device 21 with the supporting arms 19 and 20, and the housing 15 are produced separately from one another on the basis of the above-mentioned material

data. In this case, free ends 22 and 23 project into an interior 24 of the housing 15 and are connected with schematically shown carrying elements 25 of the housing 15. The carrying elements 25 are produced in one piece with the housing 15. By means of a collar 26, each supporting arm, for example, 19, penetrates an opening 27 in the housing 15, and the housing 15 rests on a shoulder 28 which bounds the collar 26.

[0017] So that the housing 15 has a functionally appropriate hold on the carrying device 21, the relatively upright supporting arms 19 and 20 have a V-shaped course from a base section 29 of the carrying device 21 to the housing 15. Finally, viewed in the driving direction B, the supporting arms 19 and 20 have an aerodynamic shape - Figure 5 -, as illustrated at letter C.

[0018] The foregoing disclosure has been set forth merely to illustrate the invention and is not intended to be limiting. Since modifications of the disclosed embodiments incorporating the spirit and substance of the invention may occur to persons skilled in the art, the invention should be construed to include everything within the scope of the appended claims and equivalents thereof.